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Chapter

Responding to Changes in Environmental Turbulence - A Strategy to Driving Business Growth in Facing Economic Downturns

Librita Arifiani, Harjanto Prabowo, Asnan Furinto and Wibowo Kosasih

Abstract

Society 5.0 focuses on people and changes from innovation to technological transformation through industrial automation 4.0. In this study, environmental turbulence refers to exogenous factors that give rise to an uncertain and volatile situation that impacts performance. This study was measured by asking respondents' perceptions through explanatory studies and preliminary surveys about market predictability, innovation, and customer preference. Disruptive innovation and environmental turbulence are key creative drivers for reengineering businesses; however, only agile innovation can take advantage of the economic downturn. Exploratory case studies and literature reviews are using to test the antecedent of environmental turbulence, Distinctive Innovation Capabilities, through an innovative business model to firm performance. From a managerial perspective, this study provides a comprehensive view of environmental turbulence's impact, how to develop a DIC strategy for developing an organization's business model, how to achieve it, what variables contribute, and how to relate it to performance. This research's authenticity lies in how management comes up with a practically oriented framework of how organizations shape to be innovative and competitive by constructing common business models. However, this study has limitations due to its qualitative nature and conceptual framework, which needs to be investigated further through large-scale surveys by quantitative research.

Keywords: environment turbulence, firm performance, business model innovation, distinctive innovation capability, Society 5.0

1. Introduction

The modern global economy is on the brink of a new industrial revolution, as evidenced by many actual trends, following the provisions of modern economic theory (economic cycle theory, crisis theory, innovation theory). Overcome the global crisis, a new wave of innovation has needed where Industry 4.0 will become

a new global industrial landmark and standard of development in the real economic sector of the entire global economic system [1]. In line with the goals of society 5.0, Industry 4.0 revolutionizes the production industry by increasing operational efficiency, new business models, services, and products. Society 5.0 focuses on using technology developed by Industry 4.0 to benefit humankind by utilizing advanced technology to solve problems and the economy. This study identifies that disruption of innovation through environmental turbulence offers opportunities to drive business development. Society 5.0 focuses on people and changes from innovation to technological transformation through industrial automation 4.0 [2, 3]. In this study, environmental turbulence refers to exogenous factors that give rise to uncertain and volatile situations that impact business performance [4, 5].

While some companies view environmental instability as a risk that threatens performance, it has understood as a threat and an opportunity for more entrepreneurial firms. It opens opportunities for the growth of various new businesses accompanied by increasingly fierce competition [6]. The desire to find ways to overcome turbulence and create growth and success from turbulence drives companies to think and act. Rapid technological advances have led to significant business developments and changes [7]. Likewise, as reported by The Global Competitiveness Report 2017–2018, the interruption and disruption of technological change create extraordinary possibilities and challenges which strengthen by using the convergence of digital, physical and organic technology that has characterized the rise of the Fourth Industrial Revolution [8].

Environmental turbulence can occur in several factors: technology turbulence, competition intensity, market turbulence, and regulation. The biggest factor is due largely to rapid technological changes and the high intensity of competition marked by customer composition changes, behavior, and preferences. In Indonesia, over the top service (OTT) penetration was long before Covid-19 eroded revenue providers [9, 10]. Even though the operator is experiencing growth, the Telco industry requires a large investment, but the income is low. Although growing, digital services have not replaced declining operator revenues [11, 12]. When environmental turbulence occurs, it causes a direct disruption to company performance. Thus, the company's initial response must be fast to reduce accumulated losses. In the firm's predetermined response model, management reactions are initiated without delay on the rational trigger point, as illustrated in **Figure 1** [13]. Due to the environment's

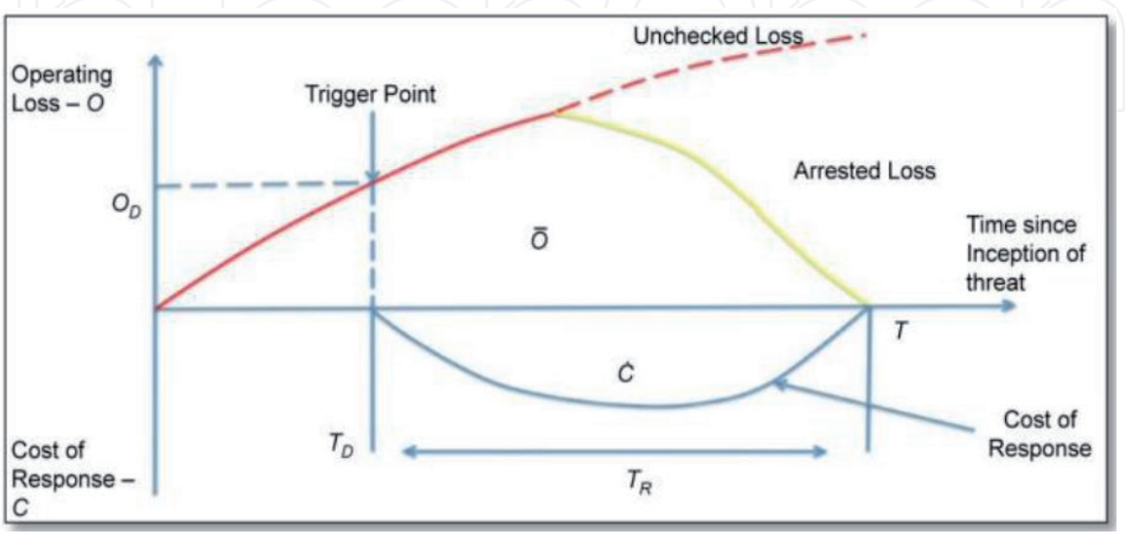

Figure 1.
Decisive model of firm response to a crisis event.

turbulent characteristics, both the base model and the Determinant model of responses are triggered after the event has occurred.

2. Methodology and research gap

In this study, the methodology used is a qualitative systematic literature review on various aspects of the topics discussed, including strategy, distinctive capability, environmental turbulence, and business model strategies. The basic ideas on carrying out such a systematic review had borrowed from leading scholars in the field [14]. Both integrative and interpretive techniques had used to uncover new insights into strategy. Various studies on dynamic strategies and volatile business environments have collected it from various primary qualitative studies conducted using this methodology. Several in-depth studies of the subject matter have carried it out so that conclusions have drawn it. Thus, the literature review's qualitative synthesis has used it as the basis for the arguments discussed in this chapter.

This study is also measured by asking respondents' perceptions through explanatory studies and preliminary surveys on market predictability, innovation, and customer preferences. Disruptive innovation through environmental turbulence is a major creative driver for reengineering businesses. It is not just innovation but *agile innovation* that can take advantage of economic downturns by developing new creative business models by *making new paradigm shifts* [15, 16]. As globalization and digitization evolve, organizations must respond quickly to changing market demands. According to Milan Krstic, 2018 agile innovation is a collaborative process that connects innovation, people, technology, projects, and outputs that impact paradigm shifts driven by competition in the market and rapid technological advances [16]. Agile innovation emphasizes creative and adaptable teamwork in solving complex problems; Lean development focuses on eliminating all losses continuously so that the innovation process is significantly faster [15]. Thus, the company can be fast responding to Changes in Environmental Turbulence to encourage business growth in the face of deteriorating company performance.

Exploratory case studies and literature reviews are using to test environmental turbulence's antecedents, Distinctive Innovation Capabilities, through business model innovation strategies to firm performance [17, 18].

This study fills the gap from the previous study. Since 2000, most business models have focused on organizations' mediating role to mediate technology capabilities and firm performance. Only a handful of research publications so far have examined how organizations innovating should have structured collaborations and interact fluidly [19, 20]. There are no studies that elaborate on how organizations exploit internal resources and structures and how to access, configure, and utilize external resources embedded in business model strategies to produce the ability to manage business turbulence in the industrial evolution of the 4.0 era through Distinctive Innovation Capabilities [21, 22]. This research's authenticity lies in how management produces a practically oriented framework of how organizations shape to be innovative and competitive by building a common business model. However, this study has limitations due to its qualitative nature and conceptual framework, which needs further investigation through large-scale surveys by quantitative research. The conceptualization and investigation of the independent and combined effects of business model innovation, environmental turbulence, and Distinctive Innovation Capabilities structures on organizational agility highlight the importance of complementarity between antecedents and add to the cumulative pool of knowledge in this research area.

From a managerial perspective, this study provides a comprehensive view of environmental turbulence impact, how to develop a Distinctive Innovation Capability strategy for developing an organization's business model, how to achieve it, what variables contribute, and how to relate it to performance. Institutional cooperation requires collaboration in an innovation environment where consumers, companies, universities, and public authorities work together to produce innovation (Quadruple Helix). It means that the resulting research can apply to national development, and higher education is responsive to industrial, customer and social needs [23, 24].

3. Conceptual development

3.1 Environmental turbulence on business model strategy

Companies are operating in a more dynamic environment that affects environmental turbulence that occurs influence business model transformation and business performance. Many studies confirm that several conditions in the Study of Environmental Turbulence and Model Transformation & Business Models affect company performance [25–28]. The more turbulent an environment, companies must rely on innovation to neutralize the outdated threats of products and technology and take advantage of new technological opportunities to create new business models that can support company performance [29, 30]. However, according to [31] pragmatically, some problems will be missed and become strategic surprises even at the most sophisticated environmental scanning method. The recent economic downturn and current pressures on the market have increased the need for leaders to have a strategic business model plan [32]. Organizations whose historical business models have based on organic growth must now strategically position themselves taking into account the new 'rules of the game' and develop a posture that increases strategic, managerial aggressiveness [33].

The process of forming a volatile environment is inseparable from the influence of technology, the emergence of a new economic order, changing values and lifestyles, and the availability of an exchange of information flows, goods and services with a decreasing price trend accompanied by the high speed of the flow of goods/services and the dissemination of information. The emergence of an economic model of sharing transportation and accommodation has disrupted business establishment. Several studies have confirmed the relationship between environmental turbulence and business strategy models and then show that it successfully competitive advantage. Besides, it mediates the role of business model innovation to show that there is a relationship, and the results of several studies suggest that business model innovation has a positive effect on company performance [34, 35].

The description above means the higher the organization's ability to provide the right solutions with a good business model innovation strategy that can provide added value to the organization. Then the innovative business model will perform better in facing competitive advantages in the telecommunications industry. Therefore, it had assumed that environmental turbulence influences business innovation. According to [36], human resources and capabilities are important components of a company's competitive advantage in a resource-based view. The concept of turbulence was initially introduced in 1965 by Emery and Trist. The business environment has been influencing by several components (competition, customers, suppliers, shareholders, public markets, regulatory bodies, legislative bodies, technology, economics, and society) [37]. Environmental turbulence influences the external environment or changes in the future [38, 39]. Based on the contingency

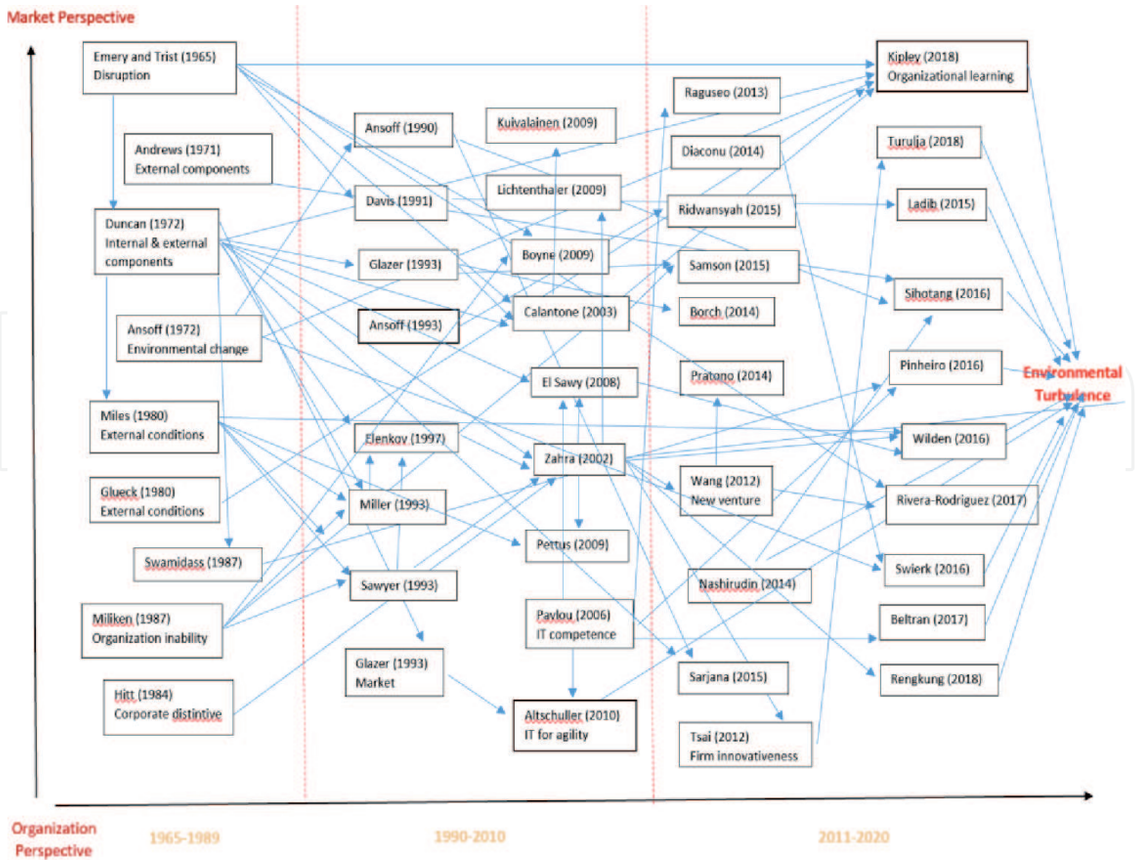

Figure 2.
Theoretical foundation of environmental turbulence. Source: Various publication

theory [40, 41], organizations react to environmental changes, and organizational strategies are determined based on environmental conditions that occur. **Figure 2** shows that many studies on environmental turbulence strategies with a link and difference focus have described it as pedigrees for the theoretical foundation of environmental turbulence from the market and organization perspective.

This study ends with the definition of environmental turbulence for the Telecommunication Industry. Organizational ability to project business planning creatively, flexibly, and adaptively to anticipate potential disruptors, new regulations, technology changes, competition, social patterns, and consumer lifestyles. The dimension of environmental turbulence in this study is; Dynamics - the extent to which the company's environmental components' elements remain the same over time or a continuous flux [42]. The degree of dynamism (instability) has influenced it by changing environmental change and change intensity. Complexity - Increasing number of elements and their interdependence [43], homogeneity/heterogeneity [44] contribute to environmental complexity. Predictability - uncertainty, or ignorance, is a dimension related to the extent of causation and the availability of information about change contributing to the level of uncertainty [39, 45].

3.2 Distinctive innovation capability and firm performance

The literature on strategic management shows different capabilities or competencies as an important part of an organization's resources and competitive advantage. Mintzberg and Quinn [46] argue that Distinctive Innovation capability, as a competitive advantage source, provides the basis for a sustainable competitive advantage [43]. Meanwhile, Drucker [47] and Cavusgil et al. [48] discussed the importance of the ability of innovation for organizations to survive in an

unstable environment [46, 47]. Innovation capability had proposed as a high-level integration capability, namely, forming and managing various capabilities [48]. Organizations with this innovation capability can integrate their company's core capabilities and resources to stimulate innovation successfully [49, 50].

According to Amabile [51] and quoted by Zhao et al. [52] states that innovation capability is the application of knowledge relevant to the achievement of value in an organization. Teece and Pisano [53] and Teece et al. [54] suggested that the winners in the global market are companies that demonstrate timely responsiveness and innovation that is fast and flexible [55, 56], together with management's ability to coordinate effectively and re-apply internal and external competencies [57]. However, Miranda and Figueiredo [58] distinguish routine and innovative companies based on technological innovation capabilities with the factors that shape vision and strategy capabilities [51, 52], utilization of competency bases, organizational intelligence, creativity and idea management, organizational structures and systems, culture and climate and technology management [53]. Saunila defines innovation capabilities by influencing an organization's ability to manage innovation [53]. These aspects include participatory leadership culture, ideation, organizational structure, climate, worker welfare, knowledge development, regeneration, external knowledge [54], and individual activity [59].

This study concludes that Distinctive Innovation capability is the company's ability to develop and manage fast and flexible innovation by leveraging technology management's creative capabilities, knowledge development, integrating capabilities, and core company resources to stimulate innovation and provide added value for companies to gain competitive advantage.

3.3 Business model strategy and innovation capability

Any organization interested in competing in a dynamic market must create unique benefits that enable it to gain a competitive advantage over competitors. However, [60] argues that business has become a global and global market, which increasingly encourages an Innovation Business Model because companies must overcome global challenges. The way to outperform competitors is through innovation. Innovation as a strategy involves creating new ideas, processes, and methods to improve current goods and services or bring them into new products and services [37]. Innovation is needed to maintain the existing competitive position and the competitive advantage that has obtained it. Most studies conclude that business model innovation increases competitive advantage and contributes significantly [58, 61]. Previous studies examined cloud and digital computing as disruptive innovations. Building on this reflection, to better understand business model innovation resulting from accepting a cloud benefit model [36, 62].

Technology has changed organizations must realize that a classic business model, such as buying and selling at a premium price, will no longer work [63]. Technological changes provide the necessary context for understanding the transformation of new digital technologies [64–66]. This article will help understand why this new business model's strategy innovation is important and why everyone should understand the most successful business models. Looking at the business model is essential to understanding how to position a company and generate additional revenue [58, 60, 67]. New business models can also help companies become more resilient to market dynamics and diversify business strategy [68, 69]. Successful disruptive business models are often customer focused. Based on the description above, the higher the organization's ability to provide the right solutions with a good business model innovation strategy that can provide sustainable Business Models, Added value to the organization, the high-level innovation will

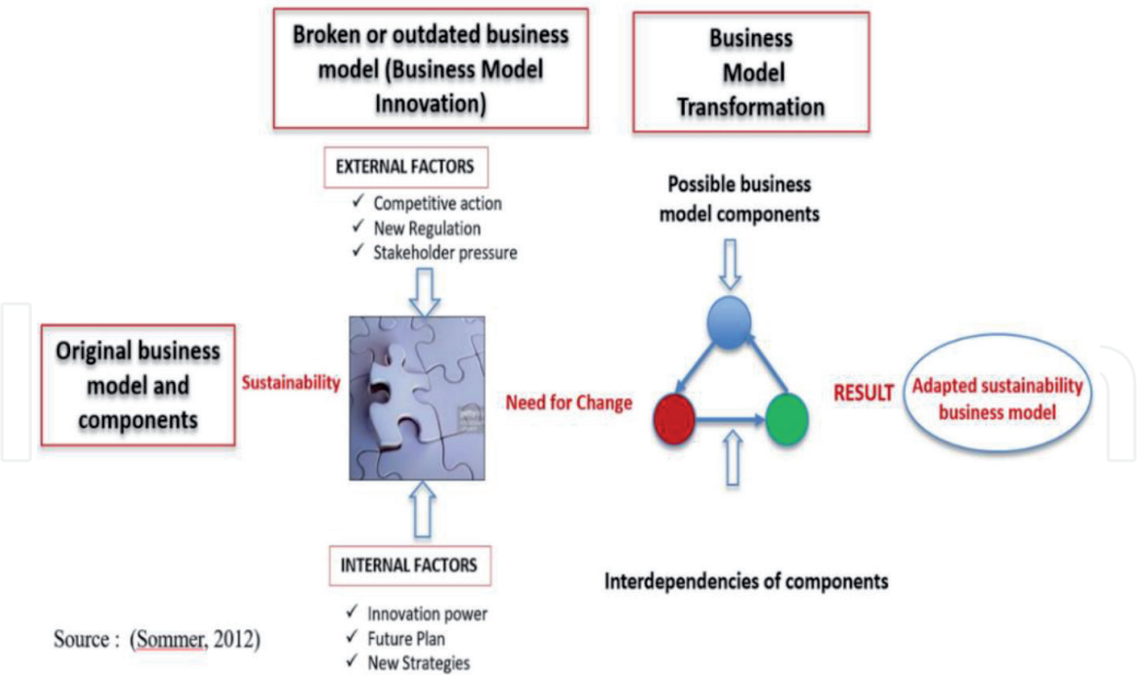

Figure 3.
Sustainability business model transformation.

perform better in the face of competitive advantage [69, 70]. Therefore, a business model paradigm's concept logic can help understand specific innovation to transformation challenges that companies will face when introducing new business models, a simplified schematic overview strategy Sustainability Business Model, reconceptualized from **Figure 3** [71].

4. Development of conceptual framework

An extensive literature review guided the choice of variables for the conceptual framework. Identify the dominant antecedents considered to form the business model innovation strategy and firm performance by developing it through exploratory case studies. Thus, in line with this study, the objectives are to examine the effect of Environmental Turbulence (ET), Distinctive Innovation Ability, and business model innovation influence firm performance (FP). The literature review of the concepts above will answer the questions in this study by explaining how the relationship between Environmental Turbulence (ET), Distinctive Innovation capabilities, and business model innovation affects company performance (FP)?

Therefore, based on the study literature and explanatory case study, this study defined several hypotheses. The following hypotheses have been compiled by modeling the relationships between the variables examined in detail in this section, and a conceptual research model developed, as shown in **Figure 4**.

1. Business model innovation has a positive effect on company performance.

2. Environmental Turbulence (ET) has a positive effect on company performance (FP) directly and indirectly through a business model innovation strategy.

3. Typical Innovation Capabilities have a positive influence on company performance (FP) directly or indirectly through a business model innovation strategy.

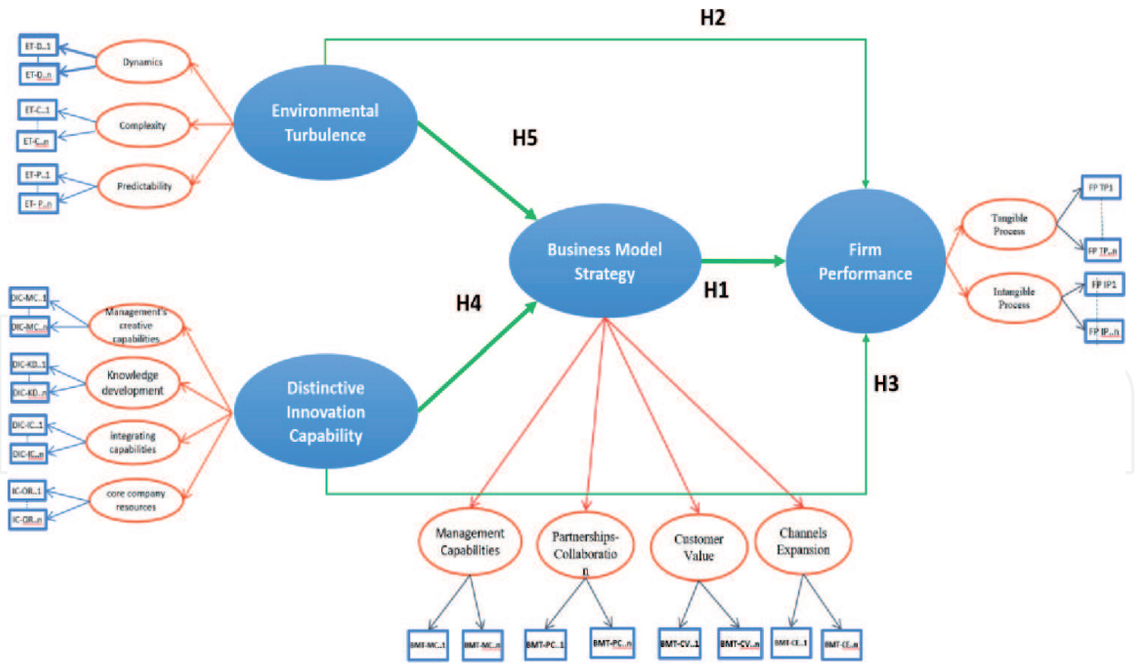

Figure 4.
Conceptual model.

The explanation above and based on the previous literature means that the higher the organization's ability to provide the right solution with a good environmental turbulence strategy that can add value to firm performance, either directly or through an innovation model business strategy. Meanwhile, based on a previous study, the higher its ability to carry out business model innovation and a good distinctive innovation capability, the higher its performance. Therefore, it should have assumed that based on the hypothesis in **Figure 4**, there is an influence between environmental turbulence, business innovation strategy, and distinctive innovation capability on company performance in the telecommunications industry.

5. Conclusion

Exploratory case studies and systematic literature reviews prove that business strategy innovation and firm performance are essential for business success when faced with intense environmental turbulence. Typical Innovation Capabilities and Firm Performance are determined by appropriate revenue in the ongoing market and the expansion of technology and innovation in products for new information for decision-making capabilities [70]. Therefore, innovative portfolio business models are at the center of strategic decision-making capabilities, especially when the complexity of innovation and dynamics increases. This study conceptually develops a framework that connects environmental turbulence, distinctive innovation capabilities, business model innovation, and tests its effect on company performance. This study uses information processing theory to propose and test the antecedents and consequences of a business model innovation strategy.

Innovative business model capabilities are a continuous change from new business strategies to keep pace with market developments, competitive advantage, and performance. Therefore, innovation capabilities are not simply the ability to successfully run a new business or manage mainstream capabilities. However, innovation capability is about synthesizing three paradigms, enabling innovative companies to produce new products and services that are quality-focused, efficient, and responsive.

This study proposes the idea of a Typical Innovation capability. We have used the innovation management literature and several case studies as examples of Cisco Systems to demonstrate how innovation capabilities synthesize new and mainstream flows to achieve effective innovation performance. The next section identifies the elements of makeup innovation capability. Therefore, the innovation capability model aims to build a theoretical framework that highlights the actions managers can take to influence innovation success. However, several attempts have made it use a dynamic capabilities approach to produce a holistic innovation capability model. Organizations focus on innovation and innovation output as a competitive strategy.

Besides, this study has been able to fill the gaps and enhance previous studies on business model innovation strategies. It has explained that the distinctive Innovation capabilities by utilizing the external organizational structure's capabilities and flexibility can face business turbulence. It allows organizations to achieve an increase in business strategy innovation capabilities, high-quality company performance in the face of economic decline, and at the same time, add to this cumulative knowledge study. Investigations of a set of antecedents of distinctive Innovation capabilities, business model innovation strategies, and environmental turbulence on company performance have highlighted the importance of complementarity as critical factors developed in future research.

6. Future research

This research has limitations in telecommunications information, communication, and technology in Indonesia. As an antecedent of the Service Innovation has identified it, and its relationship has presented, large-scale quantitative surveys will test the conceptual framework and further explore each variable's role. Furthermore, future research expands to consider the international implications of research and the broader scope.

7. Management implications/social impact

From a managerial perspective, this research gives organization management a comprehensive view of enhancing innovation business model strategy and consecutively providing a solution to customers and influencing it and their relationships. This study will benefit the telecommunications companies that want to move to digital transformation, which is still an expensive and lengthy process, by using strengthening integrative capability to perfecting internal monetization, but especially overcoming external monetization from the opportunity of environmental turbulence to leap forward. Portfolio managers have suggested it intensify the information system's use as it positively impacts an organization's innovation business performance by intensifying information exchange with internal and external stakeholders.

From the social impact perspective, with the sustainable growth of technology-based companies, through innovative business models, Distinctive Innovation capability and environmental turbulence capabilities, companies can provide general benefits from the microeconomic side to customers and at a macro level to the performance of the company and industry in general. Thus, it can be a driving force for the advancement of digitalized technology knowledge and adopted by the community to prepare development towards society 5.0.

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